CLASS : IX   MATHEMATICS

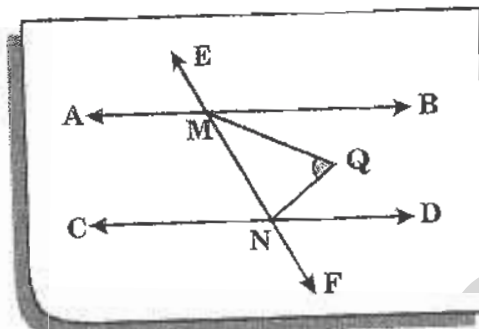**1** AB is parallel to CD, EF intersects them at M and N. The bisectors of M and N meet at Q. If $\lfloor AME = 80°$, then $\lfloor MQN$ is :

(A) 90°   (B) 70°   (C) 80°   (D) 60°

2 If $y = a + \dfrac{b}{x}$, where "a" and "b" are constants and if $y = 1$ when $x = -1$, and $y = 5$; when $x = -5$, then $a + b$ equals:

(A) –1   (B) 0   (C) 1   (D) 11

3 A rectangle of length "a" and breadth "b" is revolved 360° about its length. The volume of the resulting cylinder is:

(A) $2\pi ab^2$ (B) $\pi a^2 b$ (C) πab (D) $2\pi ab$

4 Arithmetic mean of "n" observations is m. If two observations O and m are added, then the new mean will be:

(A) m   (B) $\dfrac{m}{n+1}$ (C) $\dfrac{mn}{n+1}$ (D) $\dfrac{m(n+1)}{n+2}$

5 What is the probability that there are 53 Sundays in a leap year?

(A) $\dfrac{1}{6}$ (B) $\dfrac{2}{7}$ (C) $\dfrac{3}{8}$ (D) $\dfrac{4}{9}$

6 The remainder when $x^4 - 3x^3 + 2x^2$ is divided by x is:

(A) $x^3 - 3x^2 + 2x$ (B) $2x^2 - 3x^3$ (C) 1   (D) 0

7 If $\dfrac{xy}{x+y} = a$, $\dfrac{xz}{x+z} = b$ and $\dfrac{yz}{y+z} = c$, where a, b and c are other than zero, then x equals:

(A) $\dfrac{abc}{ab+bc+ca}$ (B) $\dfrac{2abc}{ab+bc+ca}$ (C) $\dfrac{2abc}{ab+ac-bc}$ (D) $\dfrac{2abc}{bc+ca-ab}$

8 X, Y, Z, U are four points in a straight line. If distance from X to Y is 15, Y to Z is 5, Z to U is 8 and X to U is 2, then the correct sequence of the points will be:

(A) X – Y – Z – U   (B) X – Z – Y – U
(C) X – U – Z – Y   (D) X – Z – U – Y

**9** If ABC is a triangle and D, E and F are respectively mid-points of AB, BC and CA, then the triangle ABC is:

(A) Similar to $\triangle DEF$ but not $\triangle DBE$

(B) Similar to $\triangle DEF$ but not $\triangle ECF$

(C) Similar to the triangle DBE, ECF, ADF and DEF

(D) Not similar to any of the triangles DBE, ECF, ADF and DEF

10 ABCD is a parallelogram of Area S. E and F are the middle points of the sides AD and BC respectively. If G is any point on the line EF, then the area of $\triangle AGB$ is equal to:

(A) $\dfrac{S}{2}$ (B) $\dfrac{S}{3}$ (C) $\dfrac{S}{4}$ (D) $\dfrac{3S}{4}$

11 In the figure given below, if $\angle AOP = 75°$ and $\angle AOB = 120°$, then what is $\angle AQP$?
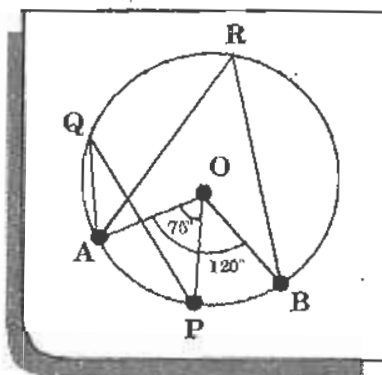
(A) 45°   (B) 37.5°   (C) 30°   (D) 22.5°

12 If the volume of two cubes are in the ratio 27 : 1, the ratio of their edges is:

(A) 3 : 1   (B) 27 : 1   (C) 1 : 3   (D) 1 : 27

13 A man has certain number of chickens and goats. Their head count is 30. If the total number of their legs is 84, what is the ratio between the number of chickens and goats?

(A) 1 : 2   (B) 2 : 3   (C) 3 : 2   (D) 3 : 4

14 If $(x - 2)$ is a common factor of $x^3 - 4x^2 + ax + b$ and $x^3 - ax^2 + bx + 8$, then the values of a and b are respectively:

(A) 3 and 5   (B) 2 and –4   (C) 4 and 0   (D) 0 and 4

15 If a and b are positive integers such that $a^b = 125$, then $(a - b)^{a+b-4}$ is equal to:

(A) 16   (B) 25   (C) 28   (D) 30

16 The sides of a triangle are 5 cm, 12 cm and 13 cm, then its area is:

(A) $0.0024\,m^2$ (B) $0.0026\,m^2$ (C) $0.003\,m^2$ (D) $0.0015\,m^2$

17 In fig. $\angle ABP = \angle ACQ$, $\angle BAC = 68°$ measure of $\angle ABC$ is:
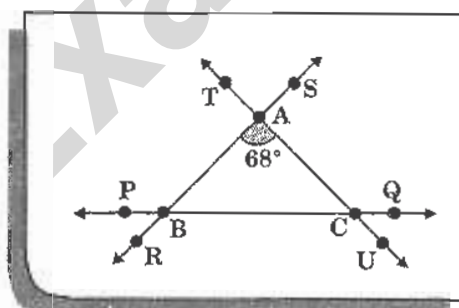
(A) 124°   (B) 56°   (C) 60°   (D) 52°

18 The area of the triangle formed between lines x = 0, y = 0 and 2x – 3y + 6 = 0 is:

(A) 3 Sq. units   (B) 4 Sq. units
(C) 2 Sq. units   (D) 5 Sq. units

19 If $37a = 37b = 5661$, what is the average of a and b?

(A) 74.5   (B) 151   (C) 76.5   (D) 153

20 The diameter of a solid metallic right circular cylinder is equal to its height. After cutting out the largest possible solid sphere S from this cylinder, the remaining material is recast to form a solid sphere S_1. What is the ratio of the radius of sphere S to that of sphere S_1 ?

(A) $1 : 2^{1/3}$ (B) $2^{1/3} : 1$ (C) $2^{1/3} : 3^{1/3}$ (D) $3^{1/2} : 2^{1/2}$

21 A rectangle and a parallelogram have equal areas. The base of the parallelogram is 20 cm and the altitude is 6 cm. Which one of the following cannot be the ratio of dimensions of the rectangle? (The dimensions are of integral values)

(A) $6 : 5$ (B) $4 : 3$ (C) $15 : 2$ (D) $30 : 1$

22 Two parallel chords of a circle whose diameter is 13 cm are, respectively, 5 cm and 12 cm in length. If both the chords lie in a semi-circle, then the distance between the chords is:

(A) 8.5 cm   (B) 5 cm   (C) 3.5 cm   (D) 3 cm

23 $p = 5 + 2\sqrt{6}$ and $q = \dfrac{1}{p}$ then, $p^2 + q^2$ is:

(A) 49   (B) 98   (C) 100   (D) None of these

24 Straight line passing through the points $(-1, 1)$, $(0, 0)$ and $(1, -1)$ has equation:

(A) $y = x$ (B) $x + y = 0$ (C) $y = 2x$ (D) $2 + 3y = 7x$

25 If the co-ordinates of the point p are $(3, -5)$, then the perpendicular distance of p from the y-axis with proper '+' or '−' sign prefixed is:

(A) −5   (B) 5   (C) 3   (D) −3

CLASS : IX   PHYSICS

26 Ranveer pulled a table cloth from a table without dislodging the dishes. This is due to:

(A) inertia   (B) impulse   (C) force   (D) momentum

27 A crane 'P' lifts a car upto a certain height in 1 minute. Another crane 'Q' lifts the same car upto the same height in 2 minute.

| I. Crane 'P' consumes two times more fuel than crane 'Q'. |
| II. Crane 'P' supplies two times more power than crane 'Q'. |

Based on the above information, identify the correct option.

(A) Statement (I) is true while statement (II) is false

(B) Statement (I) is false while statement (II) is true

(C) Both statements (I) and (II) are true

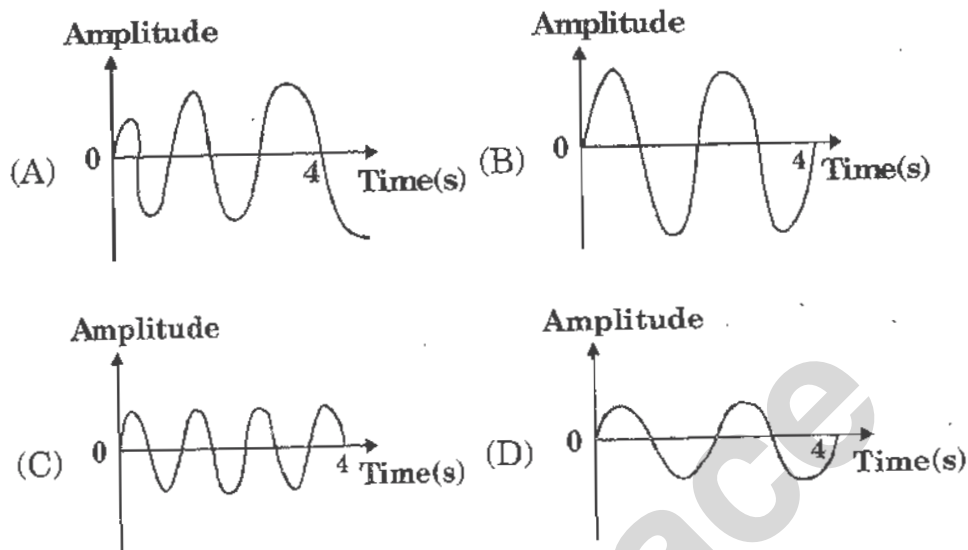(D) Both statements (I) and (II) are false

28 The graph below shows the distance travelled and the time taken by four cars?
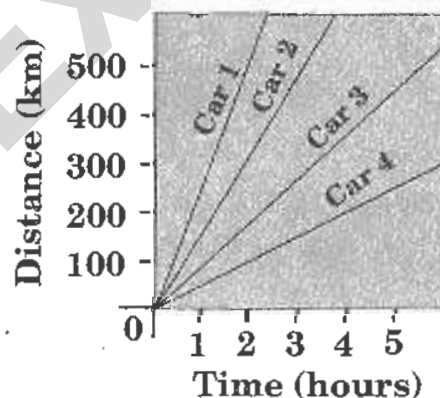
Which car travelled the slowest?

(A) Car 1   (B) Car 2   (C) Car 3   (D) Car 4

29 Which of the following sound waves have the highest pitch?

(A)

(B)

(C)

(D)

30 In which of the following cases, the net force is zero?

> I.   A ball freely falling from a certain height
> II. A cork floating on the surface of water
> III. An object floating in air

(A) I and II only

(B) II and III only

(C) III and I only

(D) I, II and III

31 A ball of mass 2 kg and another of mass 4 kg are dropped together from a 60 feet tall building. After a fall of 30 feet, their respective kinetic energies will be in the ratio of:

(A) $\sqrt{2}:1$ (B) $1:4$ (C) $1:2$ (D) $1:\sqrt{2}$

32 *Assertion* : A metal ball hits a wall and does not rebound whereas a rubber ball of the same mass on hitting the wall with the same velocity rebounds back.

Reason : Rubber ball suffers a greater change in momentum than metal ball.

(A) Both Assertion and Reason are true. Reason is the correct explanation of assertion.

(B) Both Assertion and Reason are true. Reason is not the correct explanation of assertion.

(C) Assertion is true and reason is false

(D) Both assertion and reason are false.

33 Consider a heavenly body which has a mass twice that of the earth and a radius thrice that of the earth. The weight of a book on this heavenly body, if its weight on the earth is 900 N will be :

(A) 400 N   (B) 600 N   (C) 500 N   (D) 200 N

34 Figures given below represent two types of wave motion.
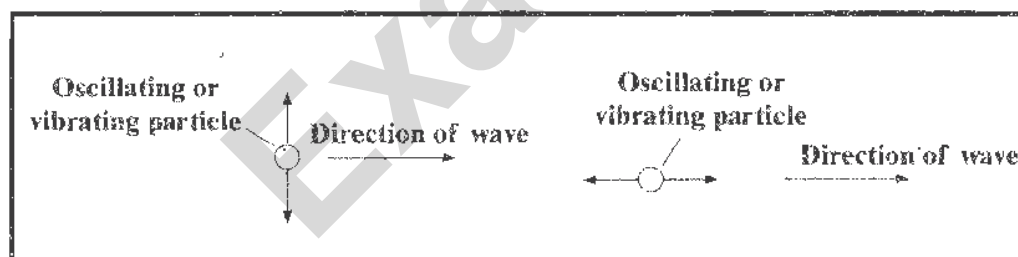
What can you infer about the types of wave motion?

(A) The direction of wave motion is always perpendicular to the direction of a vibrating particle.

(B) The direction of wave motion is always parallel to the direction of a vibrating particle.

(C) The direction of vibration of a particle and the propagation of a wave results in different kinds of wave motion.

(D) The direction of wave in positive X-axis always results in wave motion.

35 A spring balance is graduated on sea level. A body of mass 1 kg is weighed at consecutively increasing heights from the earth's surface, then what would be the weight indicated by the balance?

(A) Weight will go on increasing continuously

(B) Weight will go on decreasing continuously

(C) Weight will remain same

(D) Weight will first increase and then decreases

36 While testing the safety of a car, a dummy driver is used and the car is propelled at different speeds to hit a rigid wall. In one such test, the dummy driver had a mass of 70 kg and the speed of the car just before impact was 40 m s^{-1}. If the time interval between the collision and the car coming to rest was 0.2 s, then find the deceleration of the dummy driver due to impact?

(A) 200 m s^{-2} (B) 80 m s^{-2} (C) 110 m s^{-2} (D) 280 m s^{-2}

37 The distance of a particle versus time is shown below.
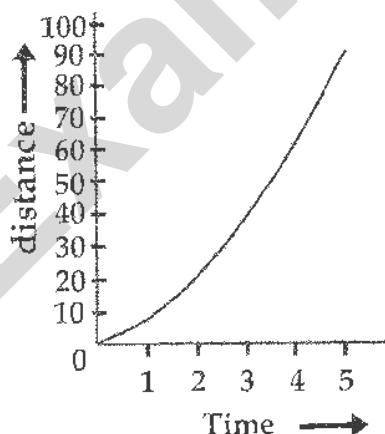
What does the graph indicate?

(A) The particle starts with certain velocity with retarded motion and finally comes to rest.

(B) The velocity of the particle is constant throughout.

(C) The acceleration of the particle is constant throughout.

(D) The particle starts with a certain velocity and finally becomes uniform after certain time.

38 *Assertion* : The kinetic energy, with any reference, must be positive.

Reason : In the expression for kinetic energy, the velocity appears with power 2.

(A) Both Assertion and Reason are true. Reason is the correct explanation of assertion.

(B) Both Assertion and Reason are true. Reason is not the correct explanation of assertion.

(C) Assertion is true and reason is false

(D) Both assertion and reason are false.

39 The given figure shows two shoulder bags, one with a thin strap, and the other with a wide strap.

If both bags are equally heavy, the sling bag with the wide strap will be more comfortable to carry because:

(A) the thin strap has a greater inertia per unit length.

(B) the thin strap causes greater momentum to be exerted.

(C) the wide strap allows friction to be spread over a bigger area, thus reducing the force between the shoulder and the strap.

(D) the wide strap enables the weight of the bag to be spread over a bigger area, thus reducing the pressure on the shoulder.

40 When the force retards the motion of a body, the work done by the force during retardation is:

(A) zero

(B) negative

(C) positive

(D) positive or negative depending upon the magnitude of force and displacement

41 In a 100 m race between Ramesh and Suresh, Ramesh wins the race. Assuming they run with uniform acceleration. Which of the following is correct?

(A) Acceleration of Suresh is more than Ramesh

(B) Acceleration of Ramesh is more than Suresh

(C) Both Suresh and Ramesh have equal acceleration

(D) Both Suresh and Ramesh have equal average velocities

42 The acceleration of a particle 'X' remains constant in magnitude but not in direction, which of the following paths does particle 'X' can have?

(A) Straight line   (B) Circular path

(C) Elliptical path   (D) Parabolic path

43 A microphone is connected to an oscilloscope. The diagram shows the trace on the screen when the microphone receives a pure note.

Which trace can be obtained when a musical instrument produces a note of the same pitch but of a different quality?

(A)   (B)

(C)   (D)

44 Rahul takes 1 minute to raise a box to a height of 1 metre and Rohan takes 1/2 minute to do so. Comment on the energy by the two.

(A) Energy spent by the Rahul is more

(B) Energy spent by both Rahul and Rohan is same

(C) Energy spent by the Rohan is more

(D) Cannot be said

45 The two ends of a train moving with uniform acceleration passes a certain point with velocities 6 kmph and 8 kmph respectively. What is the velocity with which the middle point of the train passes the same point?

(A) 14 kmph   (B) 5 kmph   (C) $5\sqrt{2}$ kmph   (D) 10 kmph

46 If the earth shrinks half in radius its mass remaining the same, then by what percentage will the weight of an object on earth change?

(A) Decreases by 50%   (B) Increases by 50%

(C) Decreases by 25%   (D) Increases by 300%

**47** A boy stands between the two walls and claps his hands as shown below:
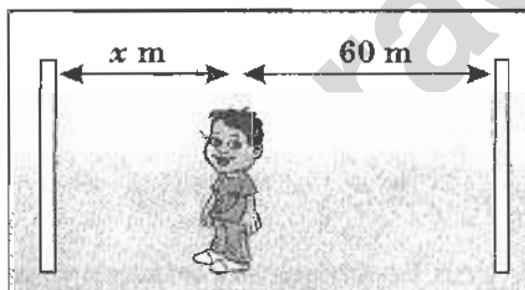
If 'x' is less than 60 m and the time between the first and the second echo is 0.25 s, then calculate the distance 'x'. (Velocity of sound in air is 344 m s^{-1})

(A) 36 m   (B) 34 m   (C) 40 m   (D) 17 m

48 The gravitational force of attraction between two bodies at a certain distance is 70 N. If the distance of separation between them is doubled, then find the percentage change in force of attraction?

(A) Decreases by 25%   (B) Decreases by 75%

(C) Increases by 50%   (D) Increases by 75%

49 Look at the figure showing an experimental setup.
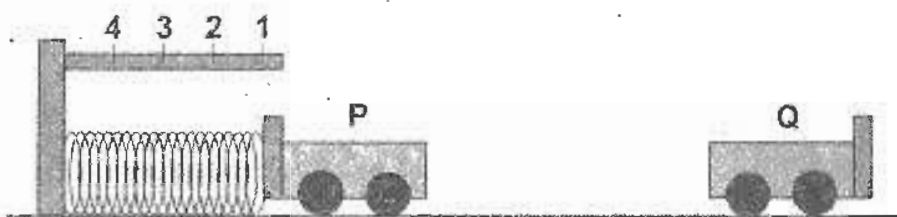
At the start of the experiment, the spring device is compressed to setting number 1 and released to propel the trolley P forward. When trolley P collides with trolley Q, both trolleys move together for certain distance. Identify the physical quantities that vary for both trolleys before and after the collison.

(A) Mass, velocity   (B) Mass, momentum

(C) Mass, time   (D) Velocity, momentum

50 Someone's car will not start, so a friend helps him by pushing it.

By pushing as hard as he can for 10 seconds he makes the car reach a speed of 2 m s^{-1}. Calculate the acceleration he gives to the car.

(A) 20 m s^{-2} (B) 0.2 m s^{-2} (C) 5 m s^{-2} (D) 10 m s^{-2}

51 Bromine has a melting point of –2 ^{0}C and a boiling point 59 ^{0}C. Identify at what temperature will bromine has a definite volume but no definite shape?

(A) 65 ^{0}C   (B) 36 ^{0}C   (C) –26 ^{0}C   (D) 0 K

52 Which of the following contains the same number of oxygen atoms?

> I.   1 g of O atoms
> II.   1 g of O_2
> III. 1g of Ozone O_3

(A) I and II only   (B) II and III only

(C) III and I only   (D) I, II and III

53 An isotope of helium is represented by the symbol $_2^3He$. How many protons, neutrons and electrons are there in an atom of the isotope?

	Protons	Neutrons	Electrons
(A)	1	2	1
(B)	1	3	2
(C)	2	1	2
(D)	2	3	2

54 A liquid 'X' is found to scatter a beam of light but leaves no residue when passed through the filter paper. Identify the category to which liquid 'X' can be classified.

(A) A suspension   (B) Colloidal sol

(C) True solution   (D) Oil

55 A salt of binary acid H_2S is M_2S_3. Find the valency of metal 'M'?

(A) 1   (B) 2   (C) 3   (D) 4

56 **What happens when a solid melts?**

(A) Its molecules move farther apart

(B) Its molecules move closer

(C) The movement of its molecules decreases

(D) The temperature decreases although heat is supplied

57 **Which of the following obey the law of constant proportions in their formation?**

(A) Mixtures   (B) Compounds

(C) Elements   (D) Colloids

58 **A beam of alpha-particles are fired at a piece of gold foil as shown in the figure below.**
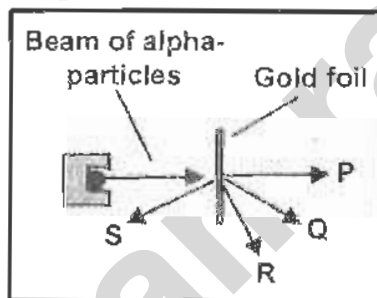
After striking the gold foil in which direction does most of the alpha-particles travel?

(A) P   (B) Q   (C) R   (D) S

59 **Which one of the following statements about the evaporation of water is *not true*?**

(A) Water can evaporate only at a temperature of 100 °C

(B) Water vapour rises to the sky and to form clouds.

(C) When water on our skin evaporates, heat is lost from our body.

(D) During evaporation, water changes from a liquid state to a vapour state.

60 **Identify a heterogeneous mixture from the following.**

(A) Brine solution   (B) Gallium

(C) Sulphur in carbon disulphide   (D) Gun powder

61 According to J.J. Thomson's atomic model, where are negative charges of an atom embedded in?

(A) A lump of positive charge (B) A lump of small atoms

(C) A lump of neutrons (D) The nucleus

62 Identify the correct increasing order of molecular weights.

(A) $H_2O > NO > CO_2 > SO_2$ (B) $H_2O < SO_2 > NO > CO_2$

(C) $SO_2 < CO_2 < NO < H_2O$ (D) $H_2O < NO < CO_2 < SO_2$

63 Which of the following statements about isotopes of an element is *not correct*?

(A) Isotopes have the same proton number.

(B) Isotopes have the same chemical properties.

(C) Isotopes have the same nucleon number.

(D) Atoms of the isotopes of the element have the same number of electrons.

64 Identify the balanced chemical equation from the following.

(A) $3Be + 3N_2 \rightarrow Be_3N_2$

(B) $2NaOH + H_2O_2 \rightarrow Na_2O_2 + H_2O$

(C) $SiCl_4 + 2H_2O \rightarrow SiO_2 + 4HCl$

(D) $3Cu + 8HNO_3 \rightarrow 3Cu(NO_3)_2 + NO + 4H_2O$

65 Four coloured sweets P, Q, R, S were analysed using paper chromatography. The chromatogram obtained is shown below.
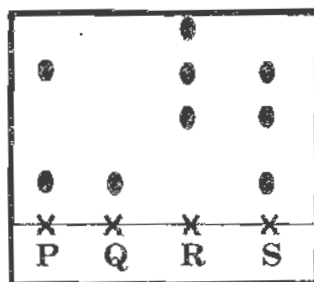
How many different coloured dyes were used to colour the four sweets.

(A) 3   (B) 9   (C) 5   (D) 4

66 Sameer added sodium hydroxide to ferric chloride solution, he found that a reddish brown precipitate is formed. By what process is the precipitate separated from the mixture?

(A) Evaporation   (B) Sublimation

(C) Filtration   (D) Fractional distillation

67 Identify the least reactive element from the following.

(A) $_8X^{16}$ (B) $_{10}X^{20}$ (C) $_{11}X^{23}$ (D) $_9X^{19}$

68 Identify physical changes from the following:

> I.   Dissolution of carbon dioxide in water
> II. Dissolution of oxygen in water
> III. Dissolution of salt in water

(A) I and II only   (B) II and III only

(C) III and I only   (D) I, II and III

69 Find the number of atoms that has the same number of molecules as contained in 32 g of O_2.

(A) 16 g of O_2 (B) 71 g of Cl_2 (C) 28 g of N_2 (D) 2 g of H_2

70 Why a gas from a small container when transferred to a larger container is able to fully occupy all the space available?

(A) Gas has no definite mass

(B) Gas has no definite shape

(C) Gas has no definite volume

(D) Gas has no definite density

71 The diagram shows the organisation of human cells.

Cells → P → Q → R → organism

Which of the following represents P, Q and R?

	P	Q	R
(A)	Muscle	Heart	Blood circulatory system
(B)	Platelet	Capillary	Digestive system
(C)	Nerve	Brain	Excretory system
(D)	Kidney	Muscle	Excretory system

72 The information given below shows the characteristics of a group of organisms.

- Primitive multicellular organisms
- Grow in moist places
- Reproduce through spores
- Obtain their food from dead and decaying organic matter

which group of organisms has these characteristics?

(A) Algae   (B) Bryophytes

(C) Fungi   (D) Pteridophytes

73 Which type of tissue supports, defends and stores food in the body?

(A) Muscle tissue   (B) Nervous tissue

(C) Epithelial tissue   (D) Connective tissue

74 The pie chart below shows the composition of the classes of food found in fish. The sector labelled 80% is indeed:

- 2%
- 18%
- 80%
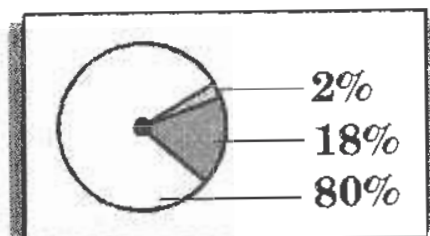
(A) For growth and repair of body tissues

(B) To provide energy for our daily activities

(C) For keeping our body healthy

(D) For strong bones and teeth

75 Which of the following is NOT a fossil fuel?

(A) Petroleum   (B) Natural gas

(C) Coal   (D) Biogas

76 What is/are common to both plant and animal cells?

I.	A cell membrane
II.	A cell wall
III.	A nucleus
IV.	Cytoplasm
V.	Chloroplast

(A) II and V only   (B) I, II and III only

(C) I, III and IV only   (D) II, III and IV only

77 A morning glory plant has a soft stem. It coils around the stems of other plants why does it do so?

I.	To support itself
II.	To get food from the plant
III.	To get as much sunlight as possible

(A) I and II only   (B) I and III only

(C) II and III only   (D) I, II and III

**78** Observe the given figure. P & R have chloroplasts but Q and S do not have chloroplasts.
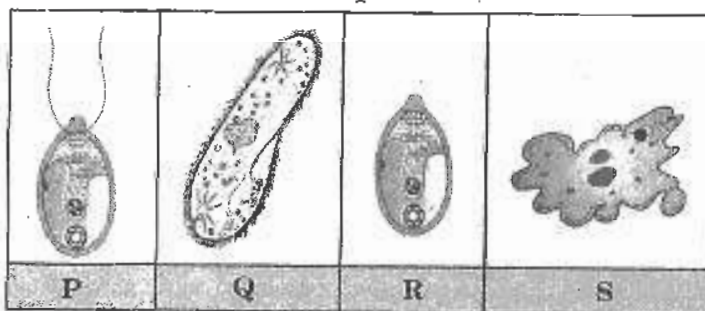
Which of the following statements about P, Q, R and S is true?

(A) P and R can move but Q and S cannot.

(B) Q and R are unicellular but P and S are multi cellular.

(C) P and S have cell wall but Q and R do not.

(D) P and R can make their own food but Q and S cannot.

79 Which of the following diseases can be transmitted through body fluids?

(A) Tuberculosis and rabies   (B) Typhoid and chlorea

(C) AIDS and hepatitis B   (D) Influenza and chlorea

80 Figure given below shows the interaction between human, plants and animals in the carbon cycle.
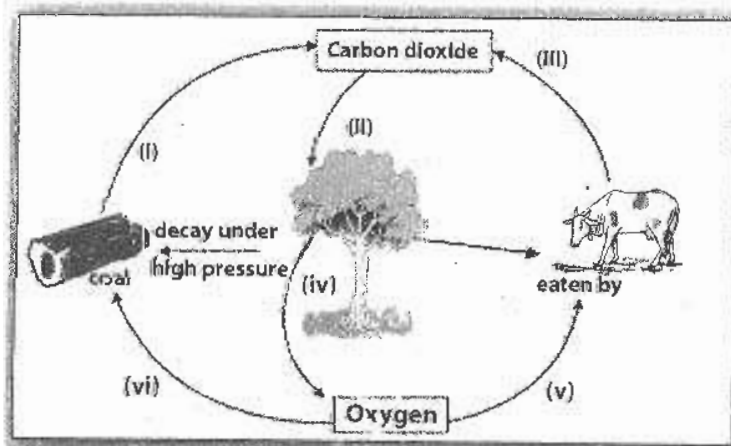
Which of the following labelled arrows represents combustion, photosynthesis and respiration respectively?

(A) (iii), (iv) and (v) Only   (B) (i), (ii) and (iii) only

(C) (ii), (iv) and (v) only   (D) (iii), (iv) and (vi) only

81 Figure given below shows two flowers of the same species.
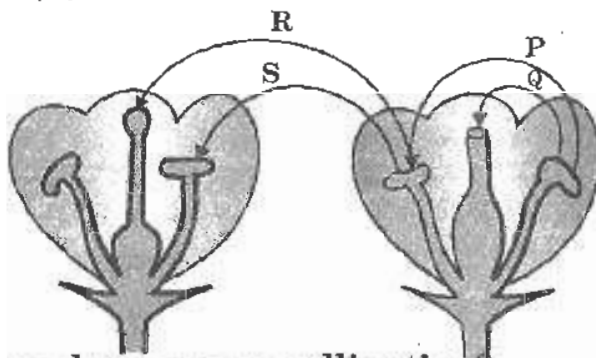
Which arrow shows cross pollination?

(A) P   (B) Q   (C) R   (D) S

82 The figure given below shows a plant.

The given plant produces daughter plants through:

(A) Suckers   (B) Corms   (C) Bulbs   (D) Stem tubers

83 In a process 'X' new varieties of crops are produced by incorporating useful genes to obtain desirable characteristics. Identify the process 'X'.

(A) Mutation   (B) Variation   (C) Hybridisation (D) Cultivation

84 Which of the following process is distinctly different from the other three?

(A) Endocytosis   (B) Exocytosis (C) Phagocytosis (D) Pinocytosis

85 Diatoms belong to which of the following groups of plants?

(A) Bacillariophyta   (B) Pteridophyta

(C) Gymnosperms   (D) Bryophyta

86 Read the information given below.

> ● Have leaves with parallel veins
> ● Have fibrous roots
> ● Have petals in multiples of 3

which plants listed below have the above characteristics?

(A) Paddy and Maize   (B) Maize and Balsam

(C) Balsam and sugar cane   (D) Sugar-cane and hibiscus

87 The information below shows a snake, a fish, a tortoise and an animal 'X' having the same characteristics.

Snake   Fish

Cold blooded

Tortoise   Animal X
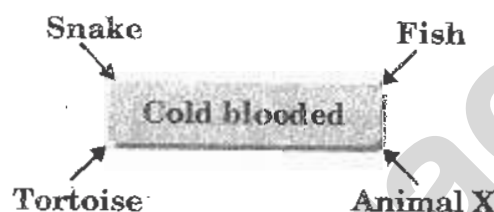
Animal 'X' is most probably a:

(A) toad   (B) mouse   (C) pigeon   (D) platypus

88 Which of the following diseases is caused by virus?

(A) Filariasis   (B) Cholera   (C) Dengue   (D) Malaria

89 How is osmosis different from diffusion?

(A) Osmosis involves the movement of solids through a liquid.

(B) Osmosis takes place with or without a membrane.

(C) Osmosis is much faster than diffusion.

(D) Osmosis involves only the movement of water molecules.
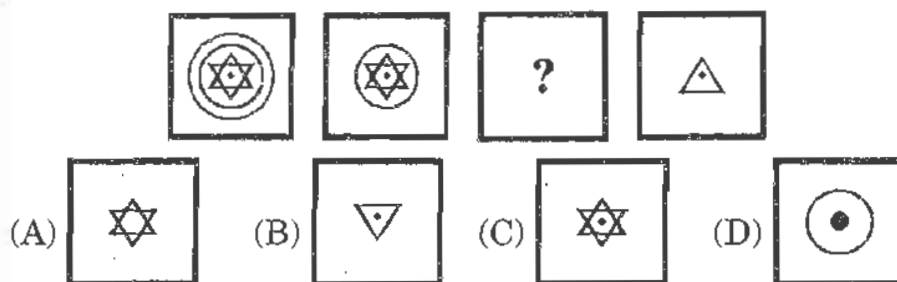
90 How do animals get their nitrogen?

(A) By absorbing nitrogen gas through the skin.

(B) By eating carbohydrates like sugars and starch.

(C) From nitrates in their drinking water.

(D) By eating plants and other animals.

CLASS : IX   GENERAL QUESTIONS

91 Complete the given series.

(A)   (B)   (C)   (D)

92 Name the first Indian who got an Oscar Award?
(A) A.R. Rahman   (B) Bhanu Athaiya
(C) Amir Khan   (D) Dilip Kumar

93 Where is the oldest oil refinery in India located?

(A) Digboi   (B) Cochin   (C) Mathura   (D) Guwahati

94 Which of these books for children won the pultizer prize in 1939?
(A) The Yearling   (B) The Fowl   (C) The kid   (D) The Cub

95 Who was the first woman chief justice of High court in India?
(A) Leila Seth   (B) Reita Faria
(C) Anna Chany   (D) Rekha M.Doshit

96 Which of the following is the executive body of the UN?
(A) General Assembly   (B) Security Council
(C) Trusteeship Council   (D) International Court of Justice

97 In which units is the processing speed in the computer measured in?
(A) Bytes   (B) Bits   (C) Hertz   (D) Seconds

98 Abhi is sixtb in the queue from either end. How many people are there in the queue?
(A) 13   (B) 12   (C) 11   (D) 10

99 Who has written the book 'Ignited Minds'?
(A) R. Venkataraman   (B) A.P.J. Abdul Kalam
(C) K.R. Narayanan   (D) Shankar Dayal Sharma

100 Where is the longest railway platform in India?
(A) Assam   (B) Kharagpur (C) Delhi   (D) Chennai

KEY FOR THE Q.P.-2011

1. A	2. D	3. B	4. D	5. B	6. D	7. D	8. C
9. C	10. C	11. B	12. A	13. C	14. C	15. A	16. C
17. B	18. A	19. D	20. B	21. B	22. C	23. B	24. B
25. C	26. A	27. A	28. D	29. C	30. B	31. C	32. A
33. D	34. C	35. B	36. A	37. C	38. A	39. D	40. B
41. B	42. B	43. B	44 B	45. C	46. D	47. D	48. B
49. D	50. B	51. B	52. D	53. C	54. B	55. C	56. A
57. B	58. A	59. A	60. D	61. A	62. D	63. C	64. C
65. D	66. C	67. B	68. B	69. A	70. C	71. A	72. C
73. D	74. A	75. D	76. C	77. B	78. D	79. C	80. B
81. C	82. D	83. C	84. B	85. A	86. A	87. A	88. C
89. D	90. D	91. C	92. B	93. A	94. A	95. A	96. B
97. C	98. C	99. B	100.B				